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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/518,682 | 06/28/2005 | Martin Mast | 10191/3626 | 5495 |

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| EXAMINER | |
|---|---|
| JENKINS, JERMAINE L | |

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| 2855 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/518,682 | MAST ET AL. | |
| | Examiner | Art Unit | |
| | Jermaine Jenkins | 2855 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *11-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12172004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

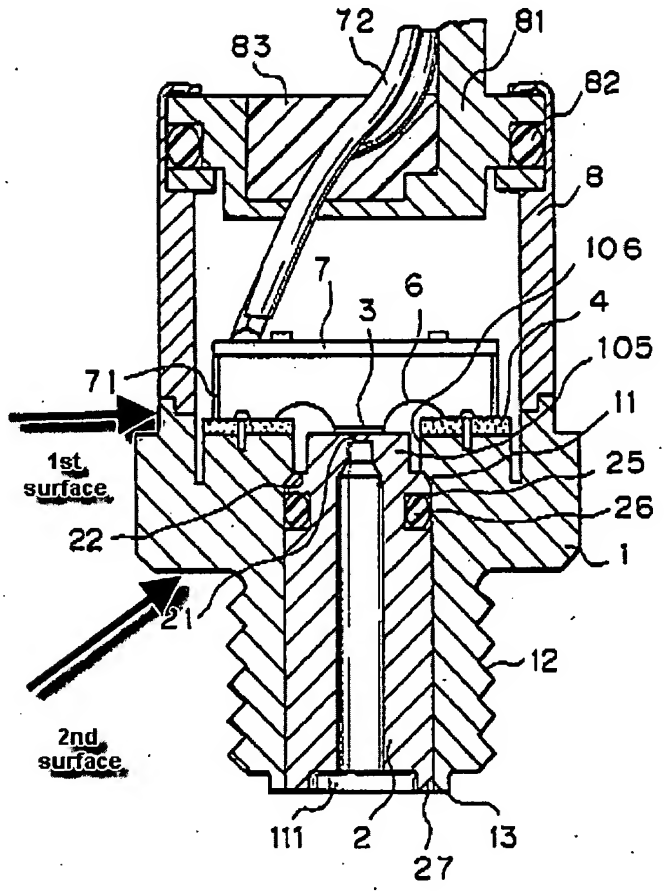
> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11-18 & 21 are rejected under 35 U.S.C. 102(B) as being anticipated by Nishida et al (4,939,497).

In regards to claim 11, Nishida et al teaches a pressure sensor having a sensor housing including a first sensor part (1, i.e. cylindrical housing) and a second housing part (81, i.e. lead holder), the first sensor housing (1) having a pressure connect piece (12, i.e. thread) and the second housing part (81) having an electrical terminal (72, i.e. lead wire); and a pressure sensor (3, i.e. semiconductor chip)(Column 3, lines 55-59); wherein the second sensor housing part (81) is coupled to the first sensor housing part (1) by a connecting part (8, i.e. cover) situated between the first sensor housing part (1) and the second sensor housing part (81) (Column 3, lines 46-51)(The pressure sensor (3) is situated within the housing which comprises many structural parts, i.e. cylindrical housing, lead holder and cover; See Figure 1).

With respect to claim 12, Nishida et al teaches wherein the connecting part (8) is a thin-walled tubular part (See Figures 1 & 6).

With respect to claim 13, Nishida et al teaches wherein the first sensor housing part (1) includes a plate-shaped part having a first surface, a second surface parallel to the first surface, and a circumferential wall configured for cooperating with a wrench (The housing (1) is formed in a hexagonal shape which is made for configuration to wrenches; See Column 2, lines 57-65), connecting part (8) being situated on the base part protruding from the second surface (According to Figure 6, the housing part (1) has a first surface and a second surface parallel to one another as depicted in the figure below).



With respect to claim 14, Nishida et al teaches wherein the circumferential wall is formed in the shape of a hexagon (Column 2, lines 57-65).

With respect to claims 15 & 16, Nishida et al teaches wherein the connecting part (12) includes a circumferential section, the circumferential section (2, i.e. sensor body) being welded to a surface of first sensor housing part (1) (Column 5, lines 37-43).

With respect to claim 17, Nishida et al teaches wherein the connecting part (12) includes a flange (13) (Column 5, lines 37-43).

With respect to claim 18, Nishida et al teaches wherein the second housing part (81) includes a circumferential housing wall having a front face and the connecting part (12) includes a circumferential groove (25) which engages with the front face of the circumferential housing wall of the second sensor housing part (Column 5, lines 34-56; See Figure 6).

With respect to claim 21, Nishida et al teaches a printed-circuit board (3, i.e. IC circuit) situated on the first sensor housing part (1); a pressure measuring cell welded to the connecting piece and electrically coupled to the printed-circuit board via bonding wires (6); and wherein the pressure measuring cell is at least partially situated in a passage in the first sensor housing part (1) (Column 3, lines 29-45; See Figures 1 & 2).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al (4,939,497) in view of Pitzer (6,227,955).

With respect to claims 19 & 20, Nishida et al teaches wherein the connecting part (8) part includes a first section that is secured in position of the second sensor housing part (81) and a second section that protrudes from the second sensor housing part (81) and configured for connection to the first sensor housing part (1) (See Figures 1 & 6). Nishida et al do not teach the second housing part being made of plastic.

Pitzer teaches a pressure sensor having a connector housing (18) being made of plastic material (Column 3, lines 27-29). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture a sensor housing made of plastic as taught by Pitzer into the pressure sensor of Nishida et al for the purpose of usage in a highly pressurized environment due to its known resilience thus minimizing breakage.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al (4,939,497) in view of Weise et al (6,453,747).

With respect to claim 22, Nishida et al teaches the claimed invention except for wherein the connecting part together with the first sensor housing part form a substantially enclosed EMC space including openings, electrical terminal elements being guided externally through the openings. Weise et al teaches a pressure sensor having a housing chamber formed between the connector and the support member with

an EMC shield (26) space (i.e. cavity) including openings, electrical terminal elements (20) being guided external through the openings (Column 4, lines 15-23; See Figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an EMC shield as taught in Weise et al into the pressure sensor of Nishida et al for the purpose of shielding the pressure sensing electronics from outside electromagnetic interferences thus enhancing accurate and reliable pressure readings.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent 6,612,178 (Kurtz et al) – Leadless Metal Media Protected Pressure Sensor
- U.S. Patent 6,543,672 (Hirota et al) – Method of Forming Vacuum Chamber of Control Valve for Variable Capacity Compressor
- U.S. Patent 6,494,099 (Chikuan et al) – Pressure Detection Apparatus Having First and Second Cases Defining Pressure Detecting Chamber There Between and Method of Manufacturing the Same
- U.S. Patent 6,311,561 (Bang et al) – Media Compatible Pressure Sensor
- U.S. Patent 6,282,966 (Probst et al) – Pressure Sensor Apparatus with Separation Membrane Held Sensor and Measuring Cell Housing Bodies

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 571-272-2179. The examiner can normally be reached on Monday-Friday 9am-530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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